AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

Claim 1 (Cancelled).

2. (Currently Amended) The method of fabricating an X-ray mask according to claim~~1~~ 7, wherein

said laminated X-ray absorber includes a first X-ray absorber opposite said X-ray transmitter and a second X-ray absorber in contact with said first X-ray absorber,

tungsten is employed as one of said first X-ray absorber and said second X-ray absorber, and

diamond is employed as the other of said first X-ray absorber and said second X-ray absorber.

3. (Currently Amended) The method of fabricating an X-ray mask according to claim~~1~~ 7, wherein

said laminated X-ray absorber includes a first X-ray absorber on said X-ray transmitter and a second X-ray absorber on said first X-ray absorber, and

the method of fabricating an X-ray mask further comprises:

forming an etching stopper film, stopping etching when etching said first X-ray absorber on said X-ray transmitter, and

forming said second X-ray absorber on said etching stopper film.

4. (Currently Amended) The method of fabricating an X-ray mask according to claim~~1~~ 7, wherein

said laminated X-ray absorber includes a first X-ray absorber opposite said X-ray transmitter and a second X-ray absorber on said first X-ray absorber, and

the method of fabricating an X-ray mask further comprises:

forming an interlayer film as an etching stopper or a hard mask on said first X-ray absorber, and

forming said second X-ray absorber on said interlayer film.

5. (Currently Amended) The method of fabricating an X-ray mask according to claim ~~1~~ 7, wherein said laminated X-ray absorber has a layer containing at least one substance selected from the group consisting of lithium, beryllium, boron, carbon, sodium, magnesium, aluminum, silicon, phosphorus, sulfur, potassium, calcium, scandium, titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper, zinc, gallium, germanium, arsenic, selenium, palladium, silver, cadmium, indium, tin, antimony, tellurium, cesium, barium, mixtures of these elements, a carbide including silicon carbide and tungsten carbide, a nitride including silicon nitride, aluminum nitride, and chromium nitride, an oxide including silicon oxide and chromium oxide, a fluoride, and an iodide.

6. (Currently Amended) The method of fabricating an X-ray mask according to claim ~~1~~ 7, wherein said laminated X-ray absorber has a layer containing a substance selected from the group consisting of carbon, titanium, vanadium, chromium, manganese, iron, nickel, copper, zinc, gallium, germanium, arsenic, selenium, palladium, silver, cadmium, indium, tin, antimony, and tellurium.

7. (Currently Amended) A method of fabricating an X-ray mask comprising :

~~forming a removed portion on~~etching an X-ray transmitter~~, leaving a portion other than said removed portion on~~ at a surface of said X-ray transmitter to form a plurality of recesses extending from the surface and into said X-ray transmitter, leaving portions of the surface between respective parts of recesses; and

forming ~~an~~ a laminated X-ray absorber on said ~~portion other than~~ surface of said ~~removed portion~~ X-ray transmitter, but not in said recesses, wherein said laminated X-ray absorber includes at least two layers having different compositions.

8. (Currently Amended) The method of fabricating an X-ray mask according to claim 7 further comprising implanting ions into said X-ray transmitter before forming said ~~removed portion~~ recesses.

9. (Currently Amended) ~~The~~ A method of fabricating an X-ray mask ~~according to claim 1, wherein forming said X-ray absorber includes~~ comprising :

forming an X-ray transmitter;

forming a first X-ray absorber opposite said X-ray transmitter, said first X-ray absorber including a plurality of spaced apart first X-ray absorber portions having a first width; and

forming a second X-ray absorber~~, different in pattern size from said first X-ray absorber,~~ on said first X-ray absorber, said second X-ray absorber comprising a plurality of second X-ray absorber portions spaced from each other, respectively disposed on corresponding first X-ray absorber portions, and having a second width, different from the first width.

10. (Currently Amended) The method of fabricating an X-ray mask according to claim 9, wherein the ~~pattern size~~ first width of said first X-ray absorber portions is larger than the ~~pattern size~~ second width of said second X-ray absorber portions.

11. (Currently Amended) A method of fabricating a semiconductor device including carrying out an exposure with an X-ray mask having a geometric X-ray phase difference between the phase of X-rays transmitted through an X-ray transmission part of said X-ray mask and the phase of X-rays transmitted through an X-ray absorber of said X-ray mask in a range including 0.5π and proximity to 0.5π, between a resist film located at a position for forming an optical image with said X-rays and said X-ray mask, wherein

said X-ray mask comprises an X-ray transmitter and said X-ray absorber includes a laminated structure having at least two layers on said X-ray transmitter,

said laminated structure includes at least two layers having different compositions, and

either the phase shift of the X-rays transmitted through said X-ray absorber is in a range of 0.3π to 0.6π or the transmittance of the X-rays transmitted through said X-ray absorber is in a range of 30 % to 60 % .

12. (Currently Amended) The method of fabricating a semiconductor device according to claim 11, including carrying out the exposure ~~on condition that~~ with an average exposure wavelength of the X-rays ~~is~~ longer than 0.3 nm and shorter than 0.7 nm.

13. (Currently Amended) The method of fabricating a semiconductor device according to claim 11, wherein absolute value of ~~a~~ difference between the geometric phase difference and the phase shift quantity is in a range including π and proximity to π.

14. (New) The method of fabricating an X-ray mask according to claim 9, wherein

tungsten is employed as one of said first X-ray absorber and said second X-ray absorber, and

diamond is employed as the other of said first X-ray absorber and said second X-ray absorber.

15. (New) The method of fabricating an X-ray mask according to claim 9, wherein the method of fabricating an X-ray mask further comprises:

forming an etching stopper film, stopping etching when etching said first X-ray absorber on said X-ray transmitter, and

forming said second X-ray absorber on said etching stopper film.

16. (New) The method of fabricating an X-ray mask according to claim 9, wherein the method of fabricating an X-ray mask further comprises:

forming an interlayer film as an etching stopper or a hard mask on said first X-ray absorber, and

forming said second X-ray absorber on said interlayer film.

17. (New) The method of fabricating an X-ray mask according to claim 9, wherein said X-ray absorber has a layer containing at least one substance selected from the group consisting of lithium, beryllium, boron, carbon, sodium, magnesium, aluminum, silicon, phosphorus, sulfur, potassium, calcium, scandium, titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper, zinc, gallium, germanium, arsenic, selenium, palladium, silver, cadmium, indium, tin, antimony, tellurium, cesium, barium, mixtures of these elements, a carbide including silicon carbide and tungsten carbide, a nitride including silicon nitride, aluminum nitride, and chromium nitride, an oxide including silicon oxide and chromium oxide, a fluoride, and an iodide.

18. (New) The method of fabricating an X-ray mask according to claim 9, wherein said X-ray absorber has a layer containing a substance selected from the group consisting of carbon, titanium, vanadium, chromium, manganese, iron, nickel, copper, zinc, gallium, germanium, arsenic, selenium, palladium, silver, cadmium, indium, tin, antimony, and tellurium.